



Planning the inquiry

1. What is our purpose?

To inquire into the following:

- Transdisciplinary theme:

Sharing the Planet : *An inquiry into the current use of renewable and nonrenewable resources and the consequences of their use in the world today; the problems created by humankind's use of different types of energy; recognizing the problems we face today, as well as those we will face in the future, and begin to think creatively about possible solutions.*

- Central idea

Consumption of finite resources impacts the sustainability of our Earth.

Summative assessment task(s):

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

<p><i>Literacy/Language</i></p>	<p><i>Write a persuasive letter to your parents encouraging them to take steps to save fossil fuels. Students will write letters to their parents persuading them to do one of the following:</i></p> <ol style="list-style-type: none"> <i>1. Walk or cycle to school and office at least twice a week.</i> <i>2. Reduce the usage of air conditioners and heaters</i> <i>3. Save electricity - suggest ways that this can be done.</i>
<p><i>Science</i></p>	<p><i>Students will make posters encouraging people to Reduce, Reuse and Recycle. Posters will include reasons.</i></p>
<p><i>Math</i></p>	<p><i>Conduct a survey to see:</i></p> <p><i>Mode of travel to school or forms of transport used. Make a comparative bar diagram based on the results.</i></p> <p><i>How many people are aware that the</i></p>

Class/grade: 4

Age group: 9 year olds

School: N/A

School code:

Title: Elementary School Teacher

Teacher(s): Sangeeta Bordoloi Lama

Date : August 13, 2022

Proposed duration: number of hours over number of weeks

Five 45-minute classes in a week for three weeks. 11.25 hours over 3 weeks (15 school periods)



2. What do we want to learn?

What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?

<p><i>Form</i></p>	<p><i>What are some of the natural resources? What are their physical characteristics?</i></p> <p><i>Classify natural resources into renewable and non-renewable resources.</i></p> <p><i>What is Climate Change?</i></p>
<p><i>Function</i></p>	<p><i>What do we use each of these natural resources for?</i></p> <p><i>What behavior/properties of the natural resources make them renewable or renewable.</i></p>
<p><i>Connection</i></p>	<p><i>Why are these natural resources important for us?</i></p> <p><i>How are our actions affecting the depletion of some resources?</i></p> <p><i>How is the use of some resources causing climate change and destroying our planet?</i></p>

form of transport being used utilizes renewable or non-renewable resources. This will be an awareness survey. Students will then make a bar diagram to compare awareness levels between students of different grades.

Responsibility

What can we do to preserve our natural resources?

What steps can we take every day to leave behind a better world for the coming generations?

How can 9-year-olds play an important role in bringing about change so that we can preserve our resources and reverse climate change?

What lines of inquiry will define the scope of the inquiry into the central idea?

- *What are some of the natural resources?*
- *Which of these are non-renewable or finite and what are some renewable resources?*
- *How are these resources being used?*
- *What can we do to preserve these resources?*
- *Are there alternative sources of energy?*

What teacher questions/provocations will drive these inquiries?

- *What are resources? What role do they play in our lives?*
- *What are natural resources?*
- *What makes them natural and why are some renewable and the others nonrenewable?*
- *What activities in our daily lives make the maximum use of non-renewable resources?*

3. How might we know what we have learned?

This column should be used in conjunction with “How best might we learn?”

What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

Students will

- *Complete a KWL (Know, Wonder, Learn) chart where they will complete the Know and Wonder columns to provide evidence about their prior knowledge of natural resources?*
- *Pin vocabulary words related to the topic of natural resources on the Word Wall.*
- *Play Kahoot quiz on Renewable and Non-Renewable resources?*

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

Line of Inquiry	Assessment
<i>What are some of the natural resources?</i>	<i>Students' learning for both of these lines of inquiry can be assessed through their Resource to Product picture book.</i>
<i>How are these resources being used?</i>	
<i>Which of these are non-renewable or finite and what are some renewable resources?</i>	<i>Students will go on a Gallery Walk around the classroom where pictures of different resources will be put up. They will then classify the resources into the two groups.</i>
<i>What can we do to preserve these resources?</i>	<i>Prior to writing the persuasive letter to their parents, students will Think Pair Share about:</i> <i>What resources are depleting?</i> <i>Why?</i> <i>How can these be preserved?</i> <i>They will share their thoughts with the class.</i>

4. How best might we learn?

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions?

Students will:

- *Engage in a Socratic Circle discussion to express their point of view on the open ended question: “Are human beings responsible for the destruction of our planet?”*
- *Read relevant articles pertaining to diminishing resources.*
- *Conduct a study in their homes of boxes or packs that have the recycle sign.*
- *Talk to your families about how they can recycle various products and have a classroom discussion to share ideas.*
- *Make a resource to product book where they will either draw or paste pictures of the resources such as plants, trees, water, fossil fuels and of the products that are made using these resources. (<https://thinkearth.org/>)*
- *Debate about Renewable and Non-Renewable resources. Renewable Resources are the need of the future - For or Against*
- *Make a windmill to light up a bulb.*

What opportunities will occur for transdisciplinary skills development and for the development of the attributes of the learner profile?

Activity	Learner Profile	Approaches to Learning in use and being developed
<i>Conduct a study in their homes of boxes or packs that have the recycle sign.</i>	<i>Inquirers</i>	<i>Research and Thinking Skills - Identifying the recycle, reuse sign on boxes, investigating how these can be recycled or reused and then applying thinking skills to increase the usage of such packs rather than the ones that cannot be recycled.</i>
<i>Debate about Renewable and Non-Renewable resources. Renewable Resources are the need of the future - For or Against</i>	<i>Knowledgeable Thinkers Communicators Open minded</i>	<i>Research, Thinking and Communication Skills - Students will use their research skills to identify and collate points for or against the motion. They will then use their</i>

	<p><i>Students will also conduct a research about why non renewable resources are in fact finite and called non renewable.</i></p>	<p><i>Write a persuasive letter to your parents encouraging them to take steps to save fossil fuels. Students will write letters to their parents persuading them to do one of the following:</i></p> <p><i>Walk or cycle to school and office at least twice a week.</i></p> <p><i>Reduce the usage of air conditioners and heaters</i></p> <p><i>Save electricity - suggest ways that this can be done.</i></p>		<p><i>communication and thinking skills to present their thoughts to the audience.</i></p> <p><i>Students will develop the same skills while writing the persuasive letter.</i></p>
<p><i>Are there alternative sources of energy?</i></p>	<p><i>The teacher will check the research document completed by students on the alternative sources of energy.</i></p>			

5. What resources need to be gathered?

What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

People : Students will conduct research about Greta Thunberg, understand what she is fighting for, and evaluate the role children can play to help her cause.

Audio visual materials : Students will watch videos on how water and wind can be used to generate electricity. Students will watch the movie “The Boy Who Harnessed the Wind” one Friday afternoon when this inquiry is being discussed.

Literature - Students will read books such as: The Magic School Bus - Monster Power, Planet Power by Stacy Clarke

Computer Application - Students will use Canva to make their Reduce, reuse, Recycle posters.

How will the classroom environment, local environment, and/or the community be used to facilitate the inquiry?

The classroom will be the first place where we will apply what we are persuading people to do: switch off the lights and air conditioner when we leave the room. Observe, check, and remind each other when we leave the tap running and waste water. Students will encourage each other to carry water bottles instead of plastic mineral water bottles. We will work together to lead by example. Students will bring back anecdotes about what each one of them did and practiced to preserve natural resources and applaud each other for the small steps taken.

6. To what extent did we achieve our purpose?

Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

7. To what extent did we include the elements of the PYP?

What were the learning experiences that enabled students to:

- develop an understanding of the concepts identified in "What do we want to learn?"
- demonstrate the learning and application of particular transdisciplinary skills?
- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.

8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

At this point teachers should go back to box 2 “What do we want to learn” and highlight the teacher questions/provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

9. Teacher notes